



PROCEEDINGS
OF THE
LINNEAN SOCIETY,
OF NEW SOUTH WALES.

WEDNESDAY, JANUARY 28TH, 1880.

The President, the Rev. J. E. Tenison-Woods, F.G.S., F.L.S.,
&c., in the Chair.

MEMBER ELECTED.

Percival Pedley, Esq., Hunter's Hill.

DONATIONS.

Memoires de la Societe Nationale des Sciences Naturelles
Cherbourg, 1878 ; from the Society.

From Dr. Bancroft, Brisbane. (1.) Diseases in Plants and
Animals. (2.) Microscope in our Garden. (3.) *Pituri* and
Tobacco.

From the President, a paper on a New Species of *Millepora*.

PAPERS READ.

MEDICINAL PLANTS OF QUEENSLAND.

By F. M. BAILEY, F.L.S., COR. MEM. R.S. TAS., &c., &c.

Some time since I wrote a series of papers on the Medicinal
Plants of Queensland, which appeared in one of the country
papers of the colony. As the articles were addressed to the
general public, they were necessarily stripped of all technical

details, and much information of a scientific character was thereby sacrificed. Since then, I have been enabled to extend my observations in this subject and think it may not be unworthy of a place in the proceedings of the Society, if I record all the information I now possess. The utility of the subject will not be questioned, and what is here given may serve to promote investigation in this most practical part of the science of botany.

Looking at our Queensland Flora one is struck with the great number of species, which are either identical with, or closely related to those in other parts of the world, particularly India, where a great many have been used in the healing art with more or less success, as may be seen by reference to works on the subject. I shall therefore go through Bentham and Muéller's excellent work, the "Flora Australiensis," and note all plants of our indigenous or naturalized flora that are mentioned in such works as Dr. Lindley's "Flora Medica" giving the properties for which they are noted. It might also be well to direct attention to a few plants, which probably contain medicinal qualities. Thus in the Northern scrubs, several species of *Tetracera*, a genus of *Dilleniaceæ*, are found climbing to the tops of the timber trees. The Queensland species of this plant are all endemic and untried, but the Brazilian species are used in the curing of certain complaints. *Brasenia peltata*, Pursh., of *Nymphæaceæ*, a curious water lily, which may be seen on a few of the ponds of still water near Brisbane, will be easily recognised by the mucilaginous substance which covers the young shoots, and its oval peltate floating leaves. In America it is considered nutritious, probably from the large-grained starch it contains. The leaves are astringent, and have been employed in phtlisis and dysentery.

Our beautiful pink water lily, *Nelumbium speciosum*, Willd. is not without medicinal qualities, for we are told by Endlicher, that the milky viscid juice of the flower-stalks and leaf-stalks is a remedy in India against sickness and diarrhœa. The petals of

the flower are also stated to be astringent. The rootstock and seed are used as food in China, India, and also in Australia.

Argemone mexicana, Tournefort. A plant of the Poppy family, with thistle-like leaves and bright yellow flowers, now naturalised in many parts of Queensland, is according to Dr. Lindley's "Flora Medica," called by the Spaniards "Figo del inferno," on account of the powerful narcotic effects of its seeds, which are stronger than opium. An emulsion prepared from them acts as an anodyne and afterwards as a purgative. This effect is denied by some, by others it is stated that the oil obtained from the seeds is used in Nevis as a substitute for castor oil. In India the juice of the plant is used in chronic ophthalmia, and in primary syphilitic sores. The infusion is said to be diuretic, and to give relief in strangury from blisters.

A tropical weed of the Caper family, *Polanisia viscosa*, DC., common in Northern Queensland, where H. W. Stone, Esq., states it is used by the natives to relieve headache. It is used in Cochin China as a counter irritant in the same way as sinapisms in Europe, and also as a vesicant. In the United States the roots are said to be used as vermifuge. The plant is covered with viscid hairs, leaves of from three to seven leaflets, flowers yellow, in terminal racemes, capsule long linear, containing numerous wrinkled seeds.

Ionidium suffruticosum, Giug., a plant of the order *Violaceæ*, from one to two feet in height, having alternate, linear leaves, bearing axillary filiform peduncles with a single small flower, all the petals of which are minute except the lowest, which is often lengthened to near half-an inch; seeds beautifully marked with longitudinal striæ. This species is common throughout Queensland also in Tropical Africa and Asia. In India the roots are used medicinally in diseases of the urinary organs, the leaves as an external application. Doubtless the other six species found in Australia would be equally efficacious.

Of *Cochlospermum* a genus of *Bixineæ* there are five species in Australia one of which is considered by Mr. Bentham likely to prove identical with the East Indian *C. gossypium* from the stems of which is obtained a gum, called kuteera, which is used as a substitute for gum tragacanth, because of its viscosity. A decoction of the roots of some of the Brazilian species is used against internal pains, particularly those resulting from falls. In the same parts, a decoction is said to cure abscesses. From the roots of an African species a yellow dye is obtained, which is called Fayar, used for dyeing cotton stuffs as well as in medicine in cases of amenorrhæa. From the above one we might fairly imagine our species to possess some medicinal virtues. The greatly admired shade tree of the beach at Cardwell, belonging to *Guttiferæ* now well known by its botanical name of *Calophyllum inophyllum*, Linn., besides its value as a shade tree in the tropics exudes from its trunk a greenish coloured resin called East Indian Tacamahac. The seeds also yield a thick, dark-green, strong-scented oil, employed in India for burning and also medicinally. In India an oil is expressed from the seeds of *C. tomentosum*, a tree according to Baron Muëller's "Fragmenta Phytographiæ Australia," also met with in the ranges about Rockingham Bay.

The three following Malvaceous plants have been found useful medicinally—*Sida cordifolia*, Linn. A coarse under shrub, more or less clothed with velvety, often star-shaped hairs, and somewhat heart-shaped leaves borne on rather long stalks at the base of which it produces its small yellow flowers. This plant, like our common Sida weed, to which it is closely allied, is met with in most tropical countries. In India the leaves are mixed with rice, and given to alleviate dysentery. The Queensland habitat is Peak Downs, &c. It may not be generally known that the ripe carpels of *Sida rhombifolia*, Linn., the common Sida weed of Queensland often cause the death of fowls that feed on them, by the sharp terminal arms of the carpels irritating the

inside and causing inflammation. Roots used in India as a remedy for rheumatism.

Abutilon indicum, G. Don. A tall shrub with roundish toothed leaves, softly downy, flowers yellow, capsule hairy, widely spread in tropical Australia, Asia, and Africa, is used in India as the mallow is in Europe, as an emolient.

Urena lobata, Linn. A tall handsome shrub, with velvety roundish obtusely-lobed leaves, and pinkish axillary flowers, succeeded by carpels covered with hooked bristles. This shrub, which belongs to the tropics of both the new and old worlds, is commonly seen in Northern Queensland, and may be also met with in some of the gullies of Taylor's Range, near Brisbane. In Brazil a decoction of the root and stem is used as a remedy for the windy colic, and the flowers as an expectorant in dry and inveterate coughs.

Carapa moluccensis, Lam. A small tree with pinnate leaves of two to six opposite leaflets of a coriaceous texture. It is found on our tropical coast and is of crooked growth. The tree which belongs to *Meliaceæ* is conspicuous from its large round shaddock like fruit, which contain four to six large irregular-shaped seeds. It is said to possess an extremely bitter principle. The seeds of other species yield valuable oils. Our Red Cedar is another *Meliaceous* tree of value not only for its timber, but for its medicinal qualities. Thus, under its botanical name, *Cedrela Toona*, Roxb., we find the bark spoken of as a powerful astringent and though not bitter, is said to be a good substitute for Peruvian Bark in the cure of remitting and intermitting fevers, particularly when joined with a small portion of the powdered seed of *Guilandina Bonduccella*, Linn., another of our plants which will be noticed in its proper order. In Java, according to Dr. Blume the bark of this cedar is used with great success in the worst epidemic fevers, diarrhoea &c. It has been also used with advantage in dysentery, in the last stage when the inflammatory symptoms have disappeared. Some consider it especially useful

in bilious fevers, and inveterate diarrhoea arising from atony of the muscular fibre.

In the Buckthorn family we have two species of *Zizyphus*, which have been found useful in the healing art. *Z. Ænoplia*, Mill, a straggling shrub, bearing sharp prickles and downy three to five nerved leaves, and fruit the size of peas, black, edible. It is said that a decoction of the bark of the fresh root promotes the healing of fresh wounds. *Z. jujuba*, Lam. A small tree, often planted in our gardens for its fruit, is, with the last found about Cape York and on the islands of the Gulf of Carpentaria in a wild state. Both are common in India, and of this last the fruit there is prepared into pectoral lozenges called "Pate de Jujube," and the bark is employed in the Moluccas as a remedy for diarrhoea. The pretty climber *Cardiospermum Halicacabum*, Linn., called in Queensland Balloon climber, in other parts Heartseed, or Heartpea from the heart-shaped scar on the seed. In India the root is considered aperient, diaphoretic and diuretic. The plant will be easily recognised by its climbing habit, twice ternate leaves, and bladder-like capsule, which resembles the calyx, that encloses the fruit of the Cape Gooseberry.

Schmidelia serrata, DC., is a straggling shrub often met with in the swamps of Northern Queensland near the coast. The leaves are of three leaflets and the berries bright red. The roots are astringent and are employed in India, where the plant is common to stop diarrhoea. These two last plants belong to *Sapindaceæ* the Soapwort family.

Leguminosae, one of the largest orders of Phænogams is divided into three sub-orders, all of which are well represented in Australia. The known genera are a little over 400, examples of about a fourth are found in Australia. To this order we are indebted for very many useful and ornamental plants, but after enumerating many of its products Dr. Lindley says:—"There is this, however to be borne in mind, in regarding the qualities

of the order in a general point of view, viz., that upon the whole it must be considered poisonous, and that those species which are used for food by man or animals are exceptions to the general rule, the deleterious juices of the order not being in such instances sufficiently concentrated to prove injurious and being in fact replaced to a considerable extent by either sugar or starch." This is verified in the first plant that will be brought into notice, which by taking the tribes of the first sub-order *Papilionaceæ* in their proper order we find is *Gastrolobium grandiflorum*, F.v. Muell. the Northern Poison Bush. This can scarcely be said to come under the denomination of a medicinal plant, yet the active principle which so sadly destroys stock, in the hands of a medical man could doubtless be made to serve some useful purpose, and it is to be hoped that before long attention will be turned to this and a few other similar dangerous plants, and a careful course of experiments carried out, which would be far better than a mere analysis of the plants by a chemist. The plant in question is worthy of a place in the garden from the beauty of its flowers; it grows to a few feet in height; has opposite (or at times a few alternate) leaves, which are usually oblong, obtuse, with a notch at the end, and covered with close silky down. The flowers are produced at the ends of branchlets in short racemes, and in colour resembles the English Wallflower (*Cheiranthus Cheri*, Linn.).

Tephrosia purpurea, Pers., is a small straggling under shrub with pinnate leaves and purple small flowers, the racemes of which are usually opposite the leaves. There are several varieties of this species; the Brisbane form may be seen on the borders of creek scrubs. A decoction of the bitter root is prescribed by Indian doctors in dyspepsia, dysentery and tympanites.

Sesbania grandiflora, Pers. A soft-wooded, rapid growing, small tree of short duration, having long glaucous pinnate leaves of often 20 to 30 oblong leaflets, common in India, found towards our North-western boundary; is said to possess a powerfully bitter tonic bark. The tree is of common occurrence in the gardens

around Brisbane; its quick growth, large white flowers, and graceful foliage causing it to be a general favourite.

S. Ægyptiaca, Pers., another species of this genus found around the Gulf of Carpentaria, and also in Asia and Africa, is said by the Hindoos to possess the power of hastening suppuration when applied as a poultice, which is simply made with warmed leaves moistened by a little castor oil. The flowers of this species are yellow and purple, borne in pendulous racemes.

S. aculeata, Pers., is much more generally met with in Australia and although I find no medicinal properties attributed to it, yet probably it would serve the same purposes as the last. It is also similarly wide-spread in other countries; its favourite habitat in Queensland is on the borders of swamps. In Northern Queensland, according to Mr. T. A. Gulliver, the natives make bread of the seeds. I am of opinion that this is the true Nardoo of the Cooper's Creek natives. The unfortunate explorers, Burke and Wills, might easily have mistaken the sporecases of a *Marsilea* for the shelled-out seeds of *Sesbania*. Writing to my friend Mr. Gulliver on the subject, he says:—"I think it quite possible that such a mistake was made by the unfortunate explorers who first brought the "Nardoo" into notice, more especially as I find the natives here (Norman River) do not seem to care about the *Marsilea* seed, and as far as I have seen it does not produce sufficient seed to make it worth collecting; whereas the *Sesbania* is very prolific and can be gathered without any, or rather, with very little trouble. This species has more numerous leaflets than the last, the flowers are also smaller, with erect racemes. The prickles are minute, or altogether wanting.

Hardenbergia monophylla, Benth., (Native Sarsaparilla). The roots of this beautiful purple flowered twiner are used by bushmen as a substitute for the true sarsaparilla, which is obtained from a widely different plant. I cannot vouch for any medicinal properties.

Abrus precatorius, Linn. A dull looking, slightly hairy twining plant with leaves of from seven to ten pair of pinnæ and racemes of dull purple or pink flowers; found rambling over the shrubs of our tropical coast, also in the East and West Indies. In the latter, the roots are used as a substitute for liquorice, and an infusion much used as a diluent drink, may be prepared from them. The seeds of which there are about four in a pod, are of a brilliant scarlet with a black scar, and are used for many ornamental purposes. These seeds at one time were considered poisonous; but on the contrary, it seems that they are sometimes used as an article of food in Egypt.

Sophora tomentosa, Linn.—Sea coast Laburnum. The roots and seeds have been regarded as specifics in bilious sickness. The whole shrub is covered with close silky hairs. Flowers, large yellow, in racemes like the Laburnum or Golden Chain of European gardens.

In the second Sub-order *Caesalpiniaæ*, purgative properties abound, and it might be well, considering we have many endemic species of *Cassias*, to look among them for a substitute for the Senna of commerce.

Cassia Absus, Linn. A small viscid plant about one foot high, leaves of two pair of leaflets which are broadly obovate, and from half to one inch long; glands between the leaflets small, stipules narrow. Flowers, usually in short terminal racemes, bracts small reflexed. It is common to tropical Asia and Africa, and is also found on our tropical coast. The seeds are extremely bitter, aromatic and mucilaginous and it is said that they are brought from the interior of Africa to Cairo under the name of Chichin or Cismatau, and are regarded as the best of remedies for Egyptian or purulent Ophthalmia.

Guilandina bonducella, Linn. This is a large rambling shrub, covered with hooked prickles; found along our tropical and other tropical coasts. The leaves are large, twice pinnate; pods short

broad, prickly, containing two or three large polished bluish-grey seeds, which are often strung into necklaces, bracelets, rosaries, &c. These seeds have a bitter taste and are employed by Indian doctors as a tonic and febrifuge. The specific name is said to be derived from the Arabic "Bondog," a necklace.

Cæsalpinia nuga, Ait. A plant of similar habit to the last is found on some of the islands off our North-east coast with seeded pods. It is said that the roots are used in decoctions for calculous and nephritic complaints.

The third Sub-order *Mimoseae* includes *Acacia* the most numerous in species of all Australian Phænogamous genera. The bark and gums of many species are used to stop diarrhœa by bushmen. From the flowers of one, *A. farnesiana*, Willd., called "Dead-finish" on the Darling Downs, a delicious perfume is distilled. This species is common to the warmer regions of the new and old world.

According to Dr. Wm. Woolls' "Contributions to the Flora of Australia," page 97, one of our *Rosaceous* plants, *Rubus parviflorus* Linn., has been found to possess some valuable medicinal properties, but what those properties are is not stated.

Although the order *Myrtaceæ* to which we are now come furnishes us with much valuable timber, it contains but few species from which medicinal drugs were obtained by Medical men of the old school. Of late attention has been turned to our *Eucalypts*, and from some valuable medicines have been obtained. An essence, with all the fragrance of the best Lisbon lemons was obtained some time back by K. T. Staiger, Esq., the Government analytical chemist, from the foliage of a species found on the Palmer River of which no flower specimens have as yet been sent down, therefore its affinity cannot be determined and it remains botanically unknown. From another species *E. citriodora*, Hooker, the same gentleman has also obtained an essence which partakes of the flavour of the citron. This latter tree is plentiful at Rockhampton.

A plant of the typical genus of *Melastomaceæ*, *Melastoma malabathricum*, Linn., is very attractive in most Queensland swamps from the profusion of its large open purple flowers and prominently three to five nerved leaves. Is recommended in cases of diarrhœa and dysentery; the leaves are the part used. The succulent fruit is edible, but dyes the mouth black, hence the generic name.

Ammannia Indica, Lan. A plant of *Lythrarieæ*, found usually on swampy land, is erect in growth with oblong or linear leaves and flowers in small axillary clusters. Queensland habitat, Endeavour River and about Cooper's Creek. The whole plant has a strong aromatic smell, leaves acrid, and commonly used by the natives of India to raise blisters in rheumatic pains, fevers, &c. The fresh leaves bruised perform their office effectually in half an hour. To this same order belongs *Lythrum Salicaria*, Linn. The common purple Loosestrife of Britain enlivens with its beautiful purple flowers many of our swamps. The whole plant is astringent, and has been recommended in inveterate cases of diarrhœa. It has also been used in tanning.

In *Cucurbitaceæ* the order to which the Cucumber and Melon belong, we have a few species which have been used in the healing of various disorders. Thus *Trichosanthes palmata*, Roxb., in India where the plant is also indigenous, the fruit is pounded and intimately blended with warm cocoa-nut oil, and considered a valuable application for cleansing and healing the offensive sores that sometimes form inside the ears. It is also supposed to be a useful remedy poured up the nostrils in cases of ozæna. As in India, so in Queensland, this plant climbs to the top of our scrub trees. The flowers are large, white, and beautifully fringed.

The bottle-gourd, *Lagenaria vulgaris*, Seringe., so plentiful along our tropical coast, is said to be a dangerous poison. It is said that some sailors were killed by drinking beer that had been standing for some time in a bottle formed of one of these fruits.

Momordica balsamina, Linn. The Balsam Apple, common in gardens, out of which it has strayed into some of our northern scrubs; has been said to be a dangerous poison, but in small doses a hydragogue.

In the large order *Compositæ*, of which the Australian genera is about 100, few species have been examined for medicinal qualities. Baron von Muéller, the learned botanist of Victoria, prepared a snuff from one of the forms of *Myriogyne minuta*, Less. one of our most common weeds some years back.

Eclipta alba, Hassk. The erect form so common near water about the Brisbane River, &c., is said to be used by the Brazilian women to stain their hair black.

The rank growing Burweed, *Xanthium strumarium*, a plant allied to the Bathurst Burr and now rapidly spreading over the country is supposed to be very injurious to Stock, numbers having died from feeding on the young succulent plants. Dr. Bancroft is at present making experiments with a view to seeing if the active principles contained in the plant cannot be put to some useful purpose. This plant differs greatly from the Bathurst Burr or *Xanthium spinosum*, L. Its leaves resemble more the mallow and it is destitute of prickles, except on its fruit.

Our indigenous Leadwort, *Plumbago zeylanica*, Linn., which is identical with the garden plant *P. capensis*, is said to act as a vesicatory, the fresh bruised bark of the root being used.

The pretty Pimpernel, *Anagallis arvensis*, Linn., one of the few plants in our pasture belonging to *Primulaceæ*, is said to possess very powerful properties. Three drachms of the extract of this plant have been found enough to kill a dog; it was found to have inflamed the mucous membrane of the stomach. It has been prescribed in epilepsy and dropsy. *Samolus Valerandi*, Linn. A plant of the same order, found often near shallow running water; is said to possess a bitter principle.

Cerbera Odallam, Gœrttn. A tree belonging to *Apocynææ* found on our tropical coast, and not uncommonly planted in our gardens where it flowers as a shrub. Of this the seeds are said to be poisonous, but the milky sap has been used as a purgative and in Java the leaves and bark as a substitute for senna.

Alstonia, another genus of Dogbanes of which there are several species in Queensland—one *A. constricta*, F. v M., produces a tonic now much used, and *A. scholaris*, B. Br., grows to a tree of large size, the timber of which is said to be bitter as gentian. In chronic diarrhœa and the advanced stages of dysentery, it has proved valuable. It has also been found effectual in restoring the tone of the stomach, and of the system generally, in debility after fevers and other exhausting diseases. This is one of several trees called white-wood about the Herbert River.

In the closely allied order *Asclepiadææ* the Red-head *Asclepiadææ curassavica*, Lem., a plant of tropical America, now fast spreading over the colony; is used in the West Indies as an emetic, and called Wild Ipecacuanha; the root which is the part used, is also purgative; a decoction is recommended in gleans and fluor albus.

We have in Queensland two species of *Strychnos*, a genus of *Loganiacææ*—one a rambling shrub with fruit of one inch or more in diameter, somewhat orange colored, met with on the Walsh Range. This is Robert Brown's *S. lucida* which is thought closely allied to the well-known *S. nux-vomica*, Linn. The other has much larger leaves and smaller fruit, and of almost climbing habit. This species is Baron Muéller's *S. psilosperma*, a form of which is plentiful in the scrubs around Rockhampton. It is to be hoped that before long the fruit of these two plants will be tested for medicinal properties.

Although some of our Gentianworts have a wide range in other countries, none seem to have enjoyed any reputation as medicinal plants, but in New South Wales two of this family seem to be used, for Dr. Woolls, in "Contributions to Flora of Australia,"

page 97, says :—“ Two little plants of the Gentian Family common enough in spring, the one with pink, the other with yellow flowers. (*Erythræa Australis*, R. Br., and *Sebæa ovata*, R. Br.) are great favourites with those persons who know the value of them, and they have proved highly efficacious in certain stages of dysentery. The pink one is generally called Centaury, and is the more powerful and like the allied European species possesses all the essential properties of the gentian of the shops, and although not used professionally is a very valuable native medicine ; in places where it grows it is carefully collected for use in rustic pharmacy.” A learned physician not a hundred miles from Parramatta was so impressed with the efficacy of this little herb from noticing the use of it amongst certain old women in his neighbourhood, that he was not too proud to adopt their remedy and recommended it to his patients. The first of these is very plentiful throughout Queensland, but the latter has only been found in one locality, (near Warwick) by Dr. Prentice.

Hydrolea zeylanica, Vahl. A creeping herb of *Hydrophyllaceæ* ; found about the Gulf of Carpentaria also in the East Indies and America. According to Wight, the leaves beaten into pulp and applied as a poultice, are in India considered efficacious in cleansing and healing ill conditional ulcers, particularly those in which maggots have begun to breed. Leaves short, lanceolate two inches long, smooth ; flowers dark blue in a terminal panicle.

Cordia myxa, Linn. A handsome tree of Northern Queensland belonging to the tribe *Cordicæ* of *Boragineæ*. The species is also dispersed over tropical Asia, from Ceylon to the Philippines. The large fruited *C. latifolia*, Roxb., is a form of this species with larger leaves and fruit. The *Sebestens* of the European *Materia Medica* is the fruit of this tree. The bark is a mild tonic, and used in India for astringent gargles ; and in Java as the chief remedy in fevers ; the roots are thought laxative. The Egyptian mummy cases were made of this timber, which is soft, and supposed the best for kindling fire by friction.

In this same tribe is also found the rather coarse herb *Trichodesma zeylanica*, R. Br., an Indian plant common in many parts of Queensland. In India this with other species, is considered diuretic, and one of the cures for the bites of snakes. Baron Mueller recommends the plant as a fodder herb, saying that the dromedaries of Mr. Giles' Exploring Party were found to be particularly partial to it.

In the beautiful order of Bindweeds, *Convolvulaceæ*, we find some of our indigenous species are still favourably spoken of as Medicinal plants in other parts of the globe where they are also met with. The roots of the order usually abound in an acrid, milky juice, which is purgative, as for instance, the common purge Jalap, and the stimulating cathartic Scammony. This purgative property is said to depend upon a peculiar resin, but with some this purgative resin is replaced by sugar or starch, and the roots then become valuable articles of food, as in the sweet potato. The first species to notice is *Ipomœa paniculata*, R. Br., a large smooth twining plant with palmately divided leaves, and showy purplish flowers; found on most tropical coasts. The thick fleshy roots of this species are said by Baron Mueller, "Select Plants," to be edible and deserving of cultivation as a food plant. But in other works the roots are said to be cathartic and used as such in many places where the plant grows. The Queensland habitat is from Rockingham Bay to Cape York. In another of our native plants of this genus *Ipomœa hederacea*, Jacq. the purgative qualities are in the seeds. The seeds are sold in the apothecaries' shops of India under the name of "Kala dana" (Black Seed), and are said to be a quick and effectual cathartic. The seeds are roasted like coffee, powdered, and administered in doses of from 30 to 40 grains, in any convenient vehicle. This plant, which is one of the most beautiful of the genus, is met with in the tropics everywhere. The leaves are usually three-lobed, and the flower a most delicate light blue; large plants may be seen in some of the gardens about Brisbane.

Ipomœa Turpethum, R. Br. Another large climbing species of our tropical coast, and also of India. It is said that the fresh bark rubbed up with milk is used in India as a purgative. About six inches in length of the root as thick as the little finger is reckoned a dose.

Ipomœa pes-caprae, Roth. The species so commonly seen trailing over the sandy beach from the Richmond River to Cape York, with leaves on long petioles, broadly emarginate, the veins of which are parallel. Peduncles long as leaves, bearing one or two large pink flowers. It is used in Brazil to form a poultice made with the boiled foliage in cases of scrofulous enlargement of the joints.

The common *Solanaceous* weed *Solanum nigrum*, Linn., the small black fruit of which is at times eaten freely by children under the name of black currants without any ill effects, although at other times it has caused dangerous sickness; is a narcotic; the extract is said to possess the same power as lettuce opium. The leaves have been used with advantage in dropsical affections. Its action is diuretic and laxative.

Another plant of *Solaneae*, the Thornapple, *Datura stramonium* Sim., which may be seen spreading over the colony, is a most useful medicinal plant. It is a violent narcotic poison when taken internally, acting fatally if taken in large doses, but a valuable medicine in mania, epilepsy, convulsions, tic doloureux &c. It palliates the distressing paroxysms of pure spasmodic asthma when smoked, for which purpose the leaves are used. It is also employed successfully as an external application, as an anodyne and sedative in burns, hæmorrhoids, irritable ulcers &c. It would be well if some person living in the parts where our endemic species *D. Leichhardtii*, F. v. M., grows were to forward a quantity down to Dr. Bancroft, who has spent so much time in testing the properties of our native plants that he might see what its properties were. This species is said to be common on the Gilbert, Comet, and Suttor Rivers.

There are two of our indigenous plants of this order that will doubtless before long be in great request. First, *Duboisia myoporoides*, R. Br. So far back as 1861 we find Rev. William Woolls, F.L.S., drawing attention to this tree, stating that it was used by the aborigines on account of its toxicant properties; he says "they make holes in the trunk and put some fluid in them, which when drunk on the following morning produces stupor also that branches of this tree are thrown into pools for the purpose of intoxicating the eels and bringing them to the surface." Dr. Bancroft has found that an extract from the leaves dilates the pupil of the eye better than Belladonna, and in an article in the *Lancet*, Feb., 15th, 1879, by Professor Sælberg Wells, F.R.C.S., on the use of Dr. Bancroft's *Duboisia* he says:—"A four grain solution of duboisin produces a much more rapid dilation of the pupil and powerful action on the muscle of accommodation than a solution of atrophine of the same strength. The pupil in a normal eye becomes dilated ad. maximum in ten to twenty minutes, the accommodation (if there is no spasm of the muscle) paralysed in twenty to forty minutes this lasting for three or four days." The other *D. Hopwoodii*, F. v. M., furnishes the natives of our Western Districts with their strong narcotic, called Pituri. While the European genera of *Scrophularineæ* contains many valuable medicinal herbs, the Australian genera seems to be of little importance in medicine although a few are used as *Herpestis mounieria*, H. B. and K., a small trailing plant with rather thick fleshy, oblong leaves and white flowers. In India the expressed juice of the leaves mixed with Petroleum is used for rubbing parts affected with rheumatic pains. Another little shrubby plant, bearing small white flowers, and leaves in whorls of three, called *Scoparia dulcis*, L., is met with from Rockhampton northward. Of this plant an infusion is used by the Indians in Spanish America to cure agues. In Brazil the expressed juice which is mucilaginous is employed as a cooling drink. Perhaps if properly examined our common swamp herb—*Gratiola*

pedunculata, R.Br., would be found to possess medicinal properties. One of the genus in former times in Europe was called *Gratia Dei*, on account of its medicinal properties, which are said to be bitter, purgative and emetic—poisonous in large doses. The European species if abundant in the pasture, is said to be dangerous to cattle.

Attention may be drawn to a small shrub of *Myoporineæ* called *Eremophila maculata*, F. v. M., or Native Fuchsia, which is regarded as a poison bush by some graziers, although others consider it quite harmless and with others of the genus, good fodder bushes. The plant bears a profusion of handsome red and yellow flowers, which should recommend it for garden culture and as there seems a doubt of its properties it would be well to have it examined for medicinal purposes. The shrub is abundant throughout the Warrego and Barcoo.

Vitex trifolia, Linn. A shrub of *Verbenaceæ*, having mealy-white leaves of from three to five leaflets and terminal panicles of pale blue flowers. Very common along our coast, and at one time on the Brisbane River. In India where it is common the small round acrid fruit is called "filfil burree" or wild pepper. The leaves are said to be a powerful discutient and are employed by the Malays to remove the boss. In other places the leaves are given in decoction and infusion and form a cataplasm which is applied to the enlarged spleen. To this order also belongs the White Mangrove, *Avicennia officinalis*, Linn., a tree widely spread over the warmer maritime regions of the new and old world. The flowers of this tree are not very conspicuous, being of a greenish yellow colour; but the fruit which begins to germinate before it falls, may be seen in great abundance along the water's edge, and has somewhat the appearance of sprouting broad-beans. The bark is used at Rio Janeiro for tanning. The unripe seeds are used in India as poultices, and when ripe boiled and eaten by the poor.

Few of our *Labiates* have been tried for medicinal purposes, yet many if examined would most likely be found to possess, if not medicine, valuable fragrant oils for other purposes. Baron von Muéller says that several of our mints yield oil of good flavour and among them our common Pennyroyal, *Mentha satureioides*, R. Br.

Valuable properties are ascribed by both native and European doctors in India to various species of *Ocimum*. *O. sanctum*, Linn. the leaves of which in a dried and pulverised state are used by the Bengal natives as snuff in the endemic affections of the nasal cavities and are termed Peenash, is said to be an effectual means of dislodging the larvæ of flies from wounds. The Australian plant is a narrow-leaved form of this species, and has a delightful fragrance resembling anise, hence Baron von Mueller's name, *O. anisodorum*.

The common horehound, *Marrubium vulgare*, Linn., which has become naturalized in many parts of the colony, is thought by some to be beneficial to sheep. An extract of this herb is a popular remedy for coughs and asthmatic complaints; it is also recommended in chlorosis and hysteria as stimulating and tonic. The plant was once used in many diseases but scarcely at all now except as a domestic remedy for chest complaints. An erect herb of this order, plentiful in the Toowoomba and other swamps. *Lycopus Australis*, R. Br, being nearly related to the English Water Horehound, from which a black dye is obtained, it might be well to try for a similar property.

The *Chenopodiaceæ* are chiefly of importance to us as containing the highly esteemed fodder called salt bushes; but from the genera *Salsola* and *Salicornia*, both salt marsh plants, large quantities of soda might be obtained.

In *Amarantaceæ* the order to which our garden Cock's-comb belongs, we find many of our most troublesome weeds and one of these, *Amarantus viridis*, Sim., is not without its use for besides

a fair substitute for cabbage the leaves have been employed externally with advantage as an emollient poultice. Another weed of this order found very plentifully about Ipswich, called *Achyranthes aspera*, Linn, easily known by its rigid erect spike of spring-fruit, which are pointed downwards on the stalk, is said to have been found useful in India in dropsical cases. According to the Pharmacopœia of India the whole plant when incinerated, yields a considerable quantity of potash, hence its sanscrit name Ap-amarga, *i.e.* the washerman, from the circumstance of the ashes being used in washing clothes. The bitter and acrid leaves of *Deeringia celosoides*, R. Br., are used against the measles in Java. This large woody straggling plant of our scrubs can be easily recognised when in fruit by its bright red currant-like berries.

The majority of the plants belonging to the Order *Polygonaceæ* or Buck-wheats, are mere weeds, but still we are indebted to it for some valuable products, for here we find the Buckwheat, Rhubarb, &c. From one plant of the order a blue dye equal to indigo is obtained. Various species of *Rumex* (Dock) whose prevailing character is astringency, have been used as remedies in cases of diarrhœa and dysentery for which our own kinds might prove equally efficacious.

The common knot-grass *Polygonum aviculare*, Linn., a troublesome trailing wiry weed, has emetic purgative fruit. This species is not so abundant here as in the southern colonies, its place however is supplied by the closely allied species *P. plebeium*, R.Br. which probably possesses the same properties.

P. barbatum, Linn., an erect hairy species common to our creeks. Is considered a diuretic at the Cape of Good Hope, and in India an infusion of its leaves is prescribed to alleviate the pain of severe colic. The leaves of *P. hispidum*, H. B. and K., according to Humbolt are used in South America as a substitute for tobacco. This latter species Mr. Benthams thinks is identical with the large species of our swamps *P. orientale*, Linn.

Attention might be drawn to one native nutmeg, *Myristica insipida*, R. Br. This forms one of the most handsome trees of our North Queensland scrubs, and bears an abundant crop of fruit, which are more oval than the nutmeg of the shops and not so aromatic, but may possess some of its medicinal properties. The true nutmegs are said to contain a volatile oil which renders them stimulant. In small quantities they relieve flatulence and allay colicky pains, but in large quantities they excite the circulations and act as narcotics. The bark of some Queensland trees belonging to the order *Laurineæ* is in use for flavouring, but oils in large quantities could be obtained from the fruit of *Hernandia bivalvis*, Benth., a tall tree common to the Brisbane River scrubs. This tree is readily known by the black nut-like fruit being enclosed in large inflated involucels which are often of a rich red color, the fruit is ten-ribbed, and so full of oil that a single fruit stuck on a stick and lighted will give a good light for two or three minutes.

Among our representatives of the dangerous order, *Euphorbiaceæ* or Spurgeworts there are fine timbers, useful fruits and some which produce good dyes, and many of more or less use medicinally *Euphorbia Drummondii*, Bois.; a small, almost prostrate herb, with oblong opposite leaves about a quarter of an inch long, bearing small flower-heads in their axils, has lately been sent from the Barcoo to P. R. Gordon, Esq., Chief Inspector of stock, stating that several sheep had been poisoned from feeding on it. And since then another gentleman has forwarded specimens of the same plant to the *Queenslander* newspaper, stating that an infusion of the herb proves almost a certain cure in cases of chronic dysentery and low fever.

Several species of our *Antidesmas* bear edible fruit of more or less value. *A. Dallachyanum*, Baill., the Herbert River cherry is by far the best. The fruit which in size equals that of large cherries, is of a sharp acid flavour resembling that of the red currant, which it also equals in colour when made into jelly, and

as the European fruit is placed among medicinal plants on account of its juice being grateful to the parched palates of persons suffering from fever, it is surely not out of place to notice our Queensland tree in these notes.

The bitter bark of *Petalostigma quadriloculare*, F. v. M., or Emu Apple, is often used as an astringent by bushmen. The bitter principle contained in the bark is not considered of value by medical men. The bark also contains a quantity of starch.

Phyllanthus simplex, Retz. A small herb about a foot high, with, while young somewhat flattened stems; leaves small in two opposite rows, flowers in clusters. The fresh plant mixed with equal parts of cumin seeds and sugar and made into an electuary is administered by the natives of India in doses of a teaspoonful a day in cases of gonorrhœa. According to Roxburgh the fresh plant bruised and mixed with buttermilk is used as a wash to cure the itch in children. This plant is met with throughout tropical Queensland.

Croton. Several trees of this genus found in the Queensland scrubs, furnish what is called Queensland Cascarilla Bark.

Aleurites moluccana, Willd., (Candlenut). A large tree often met with along the Herbert River, &c., is cultivated in some countries for the sake of its nuts. The tree is too well known in Queensland to need description as it may be seen in most of our gardens usually under the name *A. triloba*, Forst. The kernels when dried and stuck on a reed are used by the Polynesians as a substitute for candles, and as an article of food in New Georgia. These nuts resemble walnuts somewhat in size and taste. When pressed they yield a large proportion of pure palatable oil, used as a drying oil for paint, and known as country walnut and artist's oil. In Ceylon it is called Kekune oil, and in the Sandwich Islands, where it is used as a mordant for their vegetable dyes, Kukul oil. In these Islands alone, about 10,000 gallons are annually produced. The root of the tree affords a brown dye,

which is used by the Sandwich Islanders for their native cloths. According to the Pharmacopœia of India, Dr. O'Rorke found that in doses varying from one to two ozs., it acted as a mild and sure purgative producing in from three to six hours, after injection free bilious evacuations, its operation being unattended either by nausea, colic, or other ill effects. It was found to approach nearly the castor oil in the mildness and certainty of its operation, but superior to it having neither taste or smell, and as producing its cathartic action without causing any degree of nausea, whether administered in emulsion or in the pure state.

In Baron Ferd. von Mueller's useful work "Select Plants for Victorian Culture," a tree commonly met with in Queensland is spoken of—" *Mallotus philipinensis*," Mueller, Arg. Though not of great importance this bush should not be passed on this occasion, inasmuch as the powdery substance investing the seed-capsules constitutes the kamala which can be employed not only as an orange dye, but also as an anthelmintic remedy. The Hindoo silk-dyers use it for an orange colour obtained by boiling the kamalas with carbonate of soda. Dr. Lindley says the root yields the same colour as the mealy substance around the capsules, but he speaks of it as a scarlet colour. According to Lennis, in one part of India this tree is called "Corunga Munji Maram," on account of the monkeys staining their faces with the mealy substance which surrounds the capsules.

None of our naturalised plants have spread with greater rapidity over the colony than the castor oil plant, *Ricinus communis*, Linn. and if all accounts are true, few plants are of more value. Dr. Woolls in "Contributions to the Flora of Australia," says:—" *Ricinus* not only yields castor oil, but the leaves of the plant have been successfully used by Dr. Pringle as a galactopoietic." The doctor has reported two remarkable cases. The first one was that of a woman who from total absence of milk in one breast, and a very limited supply in the other had lost two children in succession in early infancy. By the application of the castor oil

leaves for about a week, the effect was truly astonishing, for the evil was remedied and the woman was enabled to rear her children afterwards. The second case was that of a delicate lady, who through the same simple application for three days was rendered capable of supplying the nourishment necessary for twins." Baron Mueller in "Select Plants," says the seeds contain about 50 per cent. of oil, to obtain which for medicinal purposes, hydraulic pressure should be employed and the seeds not subjected to heat.

Baloghia lucida, Endl., or Norfolk Island Bloodwood, a large tree, having dark green oblong leaves, and fragrant white flowers, is abundant on the Main Range, Enoggera, &c. On the trunk of this tree being wounded a large quantity of sap flows out, which Baron Mueller says forms a beautiful red indelible pigment without any admixture. The most dangerous of the trees of this order found in Queensland is *Excœcaria agallocha*, Linn., a small tree with somewhat fig-like leaves, often met with near salt rivers and swamps from the Brisbane northwards. The trunk abounds in a most dangerous virulent acrid milk; woodcutters upon whom this juice has flown after a stroke of their axe, reported to Roxburgh that it produced inflammation and ulceration. Rumphius states that sailors who were sent ashore in Amboyna to cut timber sometimes became furiously mad from the pain produced by the juice that fell on their eyes, and that some of them altogether lost their sight. The juice is a violent purgative.

The large climbing Peppermint, *Piper Novæ hollandiæ*, Miq., which may be seen climbing up the stems of our scrub trees like ivy, has been found by Dr. Bancroft to contain in its stem an aromatic principle which is likely to become valuable in medicine.

Aristolochia indica, Linn., a tall twining plant of *Aristolochiaceæ* or Birchworts, is one of the many plants recommended as antidotes to the bite of snakes. The root of this and other species are said to be used as purgatives and vermifuges in India. Several species

of this genus may be seen in our gardens, where the singularity of their flowers always attract attention.

The first *Monocotyledonous* plant met with in our flora is *Hydrocharis morsus-ranæ*, Linn., the Frogbit of England and Morene of the French. The leaves are spoken of as mucilaginous and astringent. Here as in England, this is one of the prettiest plants of our still waters. Leaves thick, heart-shaped, floating; flowers white, most abundant in March on the still waters off Brisbane River.

Ottelia alismoides, Pers. A large aquatic of tropical Queensland, in India is used as a pot-herb, and at one time seems to have enjoyed some reputation for removing the effects of the venom of the sea-dog. The leaves of this plant are often submerged and six inches in diameter.

According to the Pharmacopœia of India, the leaves of the *Banana* are in common use in the Bombay General European Hospital, for dressing blistered surfaces. For this purpose it is stated a piece of the leaf of the required size, smeared with any bland vegetable oil, is applied to the denuded surface and kept in situ by means of a bandage. A pleasant soothing sensation is communicated to the blistered surface which is found generally to heal satisfactory in four or five days. For the first two days the upper smooth surface of the leaf is placed next the skin and subsequently the under side, until the healing process is complete. An abundance of *Banana* plants either cultivated or indigenous is always to be obtained close to hand in Queensland.

No important medicinal properties have been detected in any of our *Orchids*, yet a wholesome food might be prepared from the thick starchy stems of several species.

Our species of *Hæmodorum* a genus of *Amaryllidæ* should be tried for a red dye, which it probably possesses, similar to an allied North American plant. The plant may be obtained in

quantities from most swampy places. The leaves are grass-like, panicle of flowers upright, dense and of a dingy red colour.

A few of our *Liliaceous* plants seem to have been used medicinally. *Smilax glycyphylla*, Sm., is the small sarsaparilla, found on our coast, and easily known from the larger species of our scrubs by the underside of its leaves being almost white. By some it is called sweet tea. The infusion is said to be at first sweet, afterwards bitter, and to have tonic and antiscorbutic properties.

Flagellaria indica, Linn., a tall climber, known at once by the spirally twisted point of its leaf. The leaves are said to be astringent and vulnerary.

The order *Pontederaceæ*, so far as known, is represented by a single plant, *Monochoria cyanea*, F. v. M., which Mr. Bentham considers very near *M. vaginalis*, Pr. Of this latter, Dr. Lindley says it is employed in Indian pharmacy in liver complaints, and disorders of the stomach. Rubbed down in butter and drunk, it is thought to remove redness of the eyes, powdered and mixed with sugar it is administered in asthma; and when chewed it is said to relieve toothache, brayed with milk it is given in fever, and finally when young is eaten as a pot-herb. If so much virtue is to be found in this East Indian species, certainly our Queensland plant should be examined. It will be met with in most of the shallow still waters of tropical Queensland, its root-stock creeping in the mud, leaves few on long stalks, flowers blue, seeds ribbed.

Cyanotis axillaris, Ræm. and Schult. Is one of the Spiderworts of tropical Australia and India, in the latter place a decoction of the plant is given in cases of tympanis.

A small rush *Luzula campestris*, DC., met with in Southern Queensland. The root has some reputation as a diuretic in Europe and China.

The root-stocks of several plants of *Aroideæ* are used by the natives for food after undergoing some preparation. The root-stock of the common Bulrush *Typha angustifolia*, Linn., abounds

in starch. It is somewhat astringent and diuretic and is employed in the east of Asia in dysentery, gonorrhœa, and the measles. This well-known plant is abundant in the swamps throughout the colony.

In the large order *Cyperaceæ* or sedges, several of our species have been found to possess properties which have been taken advantage of for healing disease, but none in a very high degree. Thus the roots of *Kyllinga triceps*, Rolth., is said to be employed in the East Indies in diabetes and as a stomachic, for which its acidity combined with some aroma has recommended it.

The tubers of our pest the Nutgrass *Cyperus rotundus*, Linn., are said to be administered successfully in cases of cholera by Hindoo practitioners. *Scirpus lacustris*, Linn., the Lake Club Rush, is a tall rush found in many of our swamps, the root-stock of which is said to be employed as an astringent and diuretic.

Remirea maritima, Aubl., a tropical sedge, often seen on our tropical coast sands, which it helps to bind with its long creeping stems; is said to be a powerful diaphoretic and diuretic. *Scleria lithosperma*, Willd., a hard white-seeded sedge of which we have a form on the Brisbane River, is supposed upon the Malabar coast to have antinephritic virtues.

Gramineæ or Grasses. This is undoubtedly the most interesting and useful order of plants in the whole natural system, for from it is derived the principal food for both man and beast, but few of this large order have any reputation as medicinal plants. A fragrant aromatic secretion is present in many of our *Andropogons* particularly in *A. bombycinus*, R. Br., *A. schænanthus*, var *Martini* and *A. refractus*, R. Br. This latter species I believe has been generally looked upon as endemic, but some specimens were given me a few months back by Mr. F. J. C. Wildash, which he had gathered while in Japan, at a place where there was little probability of its having been introduced. *Elionurus citreus*, Munro, is another fragrant grass. From the roots of our common

Couch grass, *Cynodon dactylon*, Pers., a cooling drink is made in India, and a decoction of *Eleusine indica*, Geot., is also employed in Demerara in the convulsions of infants.

The notice of medicinal qualities in our *Cryptogamic* plants will be brief, yet should not be altogether passed over, for we find a few plants in this class which do possess properties of value, thus *Lycopodium phlegmaria*, Linn., one of our pretty epiphytal club-mosses is reputed an aphrodisiac, and *Helminthostachys zeylanica*, Hook, a tropical swamp fern belonging to the Adder's tongue tribe of ferns, is said to be regarded in the Moluccas as a slight aperient and it is also used as a pot-herb. The fern has a short thick, creeping root-stock from which only a single frond usually rises, which is divided into three parts, each part being generally much cut. The whole is of a succulent nature. It is also said that the fronds of *Polypodium phymatodes*, Linn., are used in the South Sea Islands for scenting the oil of the cocoa-nut. This fine fern is of common occurrence on the banks of our northern rivers, and seems to contain more fragrant oil than any other of our Queensland ferns.

Little is as yet known of our mosses, but the general character of the order *Musci* is to possess a slight astringency and diuretic property, I may mention that the genus most useful to the horticulturist—*Sphagnum*, I saw a few years back in abundance in a swamp near Maroochie.

Of our *Lichens* also little is known about their properties. *Sticta pulmonacea*, abundant on the stems of the trees at Maroochie, is used in Siberia for giving a bitter to beer, and in England is employed under the name of Lungs of the Oak as a nourishing diet for weak persons.

Parmelia perlata, and *P. perforata*, two very common Australian lichens have been used in the form of a poultice in dropsical affections, but there is much doubt about their value, it being thought that the application of continuous warmth and moisture by any other means would have been equally efficacious.

Of the beautiful and curious order *Fungi*, no species seems to enjoy a reputation for medicinal virtues, yet it is rather remarkable that while from Tahiti and other places, large quantities of a species abundant in our scrubs, *Hirneola auricula Judæ*, Fr., or Jew's ear, are shipped to China to be there used in soup, no one seems to have attempted collecting the article here. At one time this curious fungus was a popular remedy for sore throats the Rev. M. J. Berkeley says, probably from some fancied resemblance of the hymenium to the fauces. From our *Fungi* as also from our *Lichens* valuable dyes might probably be obtained.

ON QUEENSLAND FERNS, WITH A DESCRIPTION OF TWO NEW SPECIES.

BY F. M. BAILEY, F.L.S., &c.

As I am about to publish a work on the Australian Ferns, it may be as well to bring before the Society a few of the changes I propose making in the nomenclature with also descriptions of the few new species which will be found therein. Thus all the *Doodias* I propose placing as forms under the one—*D. aspera*. R. Br. The advisability of this will be patent to all who have had the advantage of observing the close approach of the various forms of the usually acknowledged two species *D. aspera* and *D. caudata*, to each other. I shall in all cases retain old names, so that those who may differ with me on this point will have no difficulty in finding the fern required. *Pteris rotundifolia*, Forst., I propose reducing to a form of *P. falcata*, R. Br., and although I retain *P. paradoxa*, R. Br. I feel persuaded that this species will before long only be looked upon as another form of *P. falcata*. The pretty fern *Cheilanthes Sieberi*, will also be retained as a distinct form of *C. tenuifolia*.

SCHIZEA FORSTERI, Spreng.

Rhizome short, scaly. Fronds three to nine inches high, glossy, stipes light coloured, channelled; the upper portion of frond